COASTAL CONSERVANCY

Staff Recommendation
March 17, 2011

ZINFANDEL LANE BRIDGE FISH PASSAGE

File No. 11-002-01
Project Manager: Sam Jenniches

RECOMMENDED ACTION: Authorization to disburse up to $400,000 to Napa County to retrofit the Zinfandel Lane Bridge on the Napa River in order to remove an existing fish passage barrier southeast of the city of St. Helena, Napa County.

LOCATION: Zinfandel Lane Bridge on the Napa River, southeast of the city of St. Helena, Napa County.

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: Project Location and Site Maps

Exhibit 2: Photos

Exhibit 3: Project Letters

Exhibit 4: Mitigated Negative Declaration for the "Zinfandel Lane Bridge Fish Passage Project" (adopted by the County of Napa on June 17, 2010)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160-31165 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed four hundred thousand dollars ($400,000) to Napa County to retrofit the Zinfandel Lane Bridge in order to remove a barrier to anadromous fish passage on the Napa River, situated approximately two miles southeast of the City of St. Helena, Napa County. This authorization is subject to the following conditions:

1. The project shall not commence and no Conservancy funds shall be disbursed for the project until the Executive Officer of the Conservancy has reviewed and approved in writing:
   a. A project work program, budget, and timeline.
   b. A signing plan that acknowledges Conservancy funding.

c. Documentation that Napa County has obtained all permits and approvals required for the project under federal, state, and local law.

2. The Conservancy and Napa County shall enter into an agreement sufficient to protect the public interest in any improvement or development constructed as part of this proposed project

3. The County shall provide evidence to the Executive Officer of the Conservancy that the County has implemented the Mitigation Monitoring Program, Appendix A of the Mitigated Negative Declaration, attached to the accompanying staff recommendation as Exhibit 4."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Public Resources Code Sections 31160-31165, regarding the Conservancy's mandate to address the resource goals of the San Francisco Bay Area.

2. The proposed project is consistent with the current Project Selection Criteria and Guidelines.

3. The Conservancy has independently reviewed the Mitigated Negative Declaration and Mitigation Monitoring Program for the "Zinfandel Lane Bridge Fish Passage Project" adopted by the County of Napa Department of Public Works on June 17, 2010 (Exhibit 4) and finds that that the project as conditioned avoids, reduces, or mitigates the possible significant environmental effects to a level of insignificance and there is no substantial evidence that the project, as mitigated, will have a significant effect on the environment, as defined in 14 California Code of Regulations Section 15382."

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize a grant of up to $400,000 to Napa County to retrofit the Zinfandel Lane Bridge in order to remove a fish passage barrier on the Napa River, located southeast of the City of St. Helena. The barrier is a severe impediment to anadromous fish passage and currently blocks approximately 50% of suitable anadromous fisheries stream habitat within the Napa River watershed. The Napa River watershed is considered an "anchor watershed" in the San Francisco Bay Area for steelhead. The Napa River Watershed was ranked as having the highest restoration potential in a regional study funded by the Conservancy and conducted by the Center for Ecosystem Management and Restoration in 2007. Repair of the barrier, through retrofit, will provide immediate access to approximately 90 miles of stream habitat, corresponding to a watershed area of 81.96 square miles or 19.2% of the entire Napa River drainage. The project will have immediate benefits for Chinook salmon and steelhead trout, two special status species, and will also benefit approximately 14 other native freshwater fish species.

The objectives of the project are: 1) re-establish salmonid access to approximately 90 miles of spawning and rearing habitat, including 13 miles of the mainstem Napa River; 2) re-establish geomorphic and hydrologic processes to support self-sustaining, continuous, and diverse aquatic habitat; 3) retain or improve the structural integrity and historic characteristics of Zinfandel Lane Bridge, and 4) provide critical pre- and post- project monitoring information to evaluate project effectiveness and to guide adaptive management of the project site. Project objectives will be met by implementing the "Zinfandel Lane Bridge Fish Passage Improvement Project" plans in accordance with the associated technical

specifications, both prepared by Winzler & Kelly in August, 2010 for the Napa County Resource Conservation District ("NCRCD"). California Environmental Quality Act evaluations have been completed for the project and all necessary permits to complete the project have been issued.

Zinfandel Lane Bridge is a designated historic stone masonry bridge that was constructed in 1913 and is owned and stewarded by the Napa County Department of Public Works (NCDPW.) Since construction, the channel bed below and adjacent to the bridge has dramatically incised. The result is a 7 to 12 foot lowering of the historic channel profile and a large scour pool immediately downstream of the bridge. (See Exhibit 2, Project Photos). Over time, various ineffective repairs have been made to protect the footings of the bridge pier and abutments from scour. One of those repairs, a concrete apron on in the channel bed beneath the bridge, creates a vertical barrier to upstream migrating fish.

Retrofit of the bridge will entail reconstruction of the bridge apron. Modifications to the apron will include construction of a new channel bottom under the bridge that is up to seven feet lower than the existing apron. Two trapezoidal notches will be incorporated into the reconstructed bridge apron. The notched channel in the eastern bay will be smooth and will function as a bypass channel to convey a larger portion of the river's flow than the roughened channel in the western bay, which is intended to meet fish passage requirements. Detailed geomorphic, hydrologic, and ecological assessments were conducted during the planning phase of this project by multiple agencies and partners and the project design was developed in collaboration with a Technical Advisory Panel comprised of agency staff as well as research-level geomorphologists, fisheries biologists, and environmental engineers. The group reviewed four alternative approaches to achieve fish passage at the site. From this process, the preferred alternative was selected based on technical merit and cost/complexity of implementation. The final construction designs, including permits and final plan drawings, were completed in August, 2010.

Project monitoring, to ensure implementation effectiveness, will consist of pre- and post-project topographic channel surveys annotated with habitat measurements, a detailed review of as-built drawings and field inspections to ensure all construction specifications were met upon conclusion of construction in fall 2011, and pre- and post-project fisheries monitoring. Following the winter flow season of hydrologic year 2011-2012, the project length will be field inspected for performance of fish passage, bank stability, and channel scour.

NCDPW provides for the construction, maintenance and improvement of facilities and infrastructure within the unincorporated area of Napa County and is responsible for inspecting, protecting, repairing and maintaining approximately 450 miles of public roads, 79 bridges and 50 major drainage structures within the unincorporated area of the County.

Site Description: The Zinfandel Lane Bridge Fish Passage project is located in Napa County, one of the nine San Francisco Bay Area counties in which the Conservancy is authorized, under Sections 31160 and 31162 of the Public Resources Code, to undertake projects and award grants to address resource and recreational goals for the San Francisco Bay region. The Zinfandel Lane Bridge exerts significant pressure on steelhead and salmon populations by delaying or preventing access to high-quality upstream spawning habitat. The highest quality known habitat for Chinook salmon is located in the main stem Napa River upstream of Zinfandel Lane. Several significant steelhead tributaries including York Creek, Sulphur Creek, Mill Creek, Selby Creek, and Ritchie Creek are located upstream of Zinfandel Lane.

The Bridge is a designated historic stone masonry bridge constructed in 1913 and is owned and stewarded by NCDPW. Since construction, the channel bed, both downstream and upstream of the bridge, has dramatically incised. The result is a 7 to 12 foot lowering of the historic channel profile.

Additionally, a large scour pool has formed immediately downstream of the bridge, with about 13 to 15 feet of total scour since the bridge was constructed. (See Exhibit 2, Project Photos). The site is on a large bend in the river and the downstream western bank is on the inside of the bend and has a relatively stable bank, good holding habitat for fish and riparian canopy cover along the edges. There has been obvious erosion of the downstream eastern bank, which is on the outside of the river bend. There is a vertical concrete wall along the eastern side of the scour pool that protects a section of the bank from erosion and preserves a large oak tree. Upstream of the bridge, channel banks appear to be most unstable along the western bank.

The existing apron and cutoff walls under the Zinfandel Lane Bridge are in poor condition, undercut along the upstream and downstream edges, and contain large pockets formed where concrete has been removed by scour. Due to piping under and around the cutoff walls, all of the streamflow in the Napa River flows under the apron when the river's flow becomes less than approximately 5 cubic feet per second. This condition occurs throughout the summer months and continues into the fall Chinook salmon migration period in late November through December.

Some modifications to the grouted riprap, apron and tailwater control have been made to improve leaping conditions and increase depth across the apron for fish passage. However, adult salmon and steelhead are still often observed leaping repeatedly at the site. The apron is also a total barrier to juvenile salmonids that may attempt to move upstream for dispersal, foraging, thermal refugia or other reasons.

During low flows the structure requires repeated leap attempts to pass, which causes exhaustion, injury, and even mortality to migrating fish. Salmon and steelhead that are unable to pass the bridge structure must spawn in marginal habitat in the reach immediately downstream. During recent spawning surveys (2005-2008), NCRCD biologists documented unusually high redd densities below the bridge in locations vulnerable to scour, which likely reduced egg-to-emergence survival and consequently overall salmon production within the Napa River basin.

Project History: The concrete bridge apron supporting Zinfandel Lane Bridge has long been identified as a barrier to fish migration by the NCRCD. The U.S. Army Corps of Engineers funded NCRCD in April, 2006 to assess the site and develop alternative scenarios to improve conditions. The Zinfandel Lane Bridge Fish Passage Assessment was completed in December, 2006 and five alternative scenarios were conceptualized with recommendations for a preferred alternative. The preferred alternative recommended modification to the bridge apron to help focus flows through the opening rather than under the apron and to provide additional protection to the bridge foundation. However, geotechnical analysis of the bridge foundation was recommended to more fully assess the feasibility of the alternative and to further define the engineering requirements. At this time, NCRCD engaged NCDPW, owner and steward of the bridge, in the project and sought funds to conduct the recommended technical investigation.

With an interest in seeing that the Zinfandel Lane Bridge barrier be retrofitted for fish passage, the Peter A. and Venice H. Gasser Foundation (a local foundation in Napa County), donated $23,700 to the NCRCD to conduct the geotechnical investigation of the bridge's pier footing and provide recommendations for measures to protect/support the pier foundation with respect to modification of the apron for the purpose of fish passage improvements. The geotechnical assessment was completed in December 2007 and in 2008, NCDPW and NCRCD partnered to request bids for a consultant to develop final engineered construction designs for the bridge, complete environmental review for the project, and

assist with permitting. NCDPW granted approximately $209,000 to NCRCD to contract Winzler and Kelly and oversee and manage the final design phase of the project.

Final design, environmental review and permitting were completed in 2010. NCDPW would like to retrofit the bridge in summer 2011. This project is a high priority for local organizations (e.g., NCRCD, Napa County Flood Control and Water Conservation District, Friends of the Napa River, Sierra Club, Napa River Steelhead, Rutherford Dust Society, etc.), Regional Water Quality Control Board, Department of Fish and Game, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. (See Exhibit 3, Project Letters).

Relation to other Conservancy Projects:

1) This project is also related to a project of the NCRCD, currently funded by the Conservancy, to assess priority fish barrier sites in the Napa River basin and develop retrofit or removal plans. Other than municipal reservoirs, Zinfandel Lane Bridge is the highest priority fish passage barrier in the basin and its retrofit should be addressed prior to addressing other priority barriers that are located upstream from the site. Once the barrier at Zinfandel Lane is addressed, other priority sites, will become increasingly important for repair.

2) This project is at the northernmost end of the NCRCD's Rutherford Reach Restoration Project ("Rutherford Project"), which received financial support for initial restoration design from the Conservancy in 2004. The Rutherford Project spans 4.5 miles of the main stem Napa River immediately south of Zinfandel Lane Bridge. The Rutherford project is a collaborative effort among private landowners, NCDPW, Napa County Flood Control and Water Conservation District, NCRCD and others to restore spawning and rearing habitat, reduce bank and channel bottom erosion, improve riparian habitat and cover, and provide flood management services. The Zinfandel Lane Bridge Fish Passage project will extend habitat access further upstream

PROJECT FINANCING:

Conservancy	$400,000
Napa County "Measure A" Funds	$666,000
Total Project Cost	**$1,066,000**

The anticipated source of Conservancy funds is an appropriation to the San Francisco Bay Area Conservancy Program from the "Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006" (Proposition 84). Proposition 84 authorizes the use of these funds for purposes of the protection of coastal waters and watersheds and to protect and restore the natural habitat values of coastal waters and lands. (Public Res. Code **§** 75060). Funds may be used for projects in accordance with the Conservancy's enabling legislation, Division 21 of the Public Resources Code. (Public Res.Code **§** 75074). This project is also appropriate for prioritization under the selection criteria set forth in Section 75071 in that there are non-state matching contributions toward the restoration.

Site assessment & conceptual project design, geotechnical feasibility analysis, and final design, environmental review, and permitting have already been completed by NCRCD with funds from U.S. Army Corps of Engineers ($25,000), Gasser Foundation ($23,770) and NCDPW ($290,000).

Volunteers will conduct pre- and post-project monitoring of outmigration of salmonid species for a period of two years. This in-kind service is conservatively valued at approximately $10,800. NCDPW is committed to post-project monitoring at the site to ensure effectiveness of the project and stability of the bridge and surrounding environment.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The project is undertaken pursuant to Chapter 4.5 of the Conservancy's enabling legislation, Public Resources Code Sections 31160-31165, to address resource goals in the San Francisco Bay Area.

Under Section 31162(b), the Conservancy may provide grants to protect, restore, and enhance natural habitats of regional significance. The proposed project would assist in the enhancement of some ofthe highest quality natural habitat of the Chinook salmon and steelhead trout, in the Bay Area.

The Zinfandel Lane Bridge Fish Passage project satisfies all of the criteria for determining project priority under 31163(c), since the project: **1)** is supported by adopted regional plans including; the *Napa River Sediment Total Maximum Daily Load and Habitat Enhancement Plan*, (Regional Water Quality Control Board, 2009; State Water Resources Control Board, 2010), the *Napa County General Plan* - Conservation Element, (Napa County, 2008), the *San Francisco Bay Plan*-Fish, Aquatic Organisms and Wildlife - Policy 2, (San Francisco Bay Conservation and Development Commission), the *Steelhead Restoration and Management Plan for California*, (California Department of Fish and Game, 1996, updates to Steelhead Tasks in 2010), and the *Central California Coast Steelhead Recovery Plan*, (National Marine Fisheries Service, Draft Document), **2)** serves a regional constituency by creating access to habitat for Chinook salmon and steelhead trout, two special status species; **3)** can be implemented in a timely manner; **4)** provides benefits to anadromous fish that would be lost if the project is not quickly implemented; and **5)** will include significant matching funds and significant in-kind services from NCDPW.

CONSISTENCY WITH CONSERVANCY'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 10, Objective H**, the proposed project will eliminate a fish passage barrier, thereby enhancing riparian habitat through the removal of an instream migration barrier for salmonids. The project will directly enhance 100 feet of riverine habitat and re-establish salmonid access to approximately 90 miles of spawning and rearing habitat, including 13 miles of the mainstem of the Napa River.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted June 4, 2009, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The project has received significant public support from the early concept and design phases. Supporters include Congressman Mike Thompson, California Senator Noreen

Evans, California Assemblymember Michael Allen, Napa County Board of Supervisors, National Marine Fisheries Service, U.S. Fish & Wildlife Service, California Department of Fish and Game, Natural Resources Conservation Service, U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, Napa County Flood Control and Water Conservation District,

Napa County Resource Conservation District, Napa County Regional Parks and Open Space District, Napa County Conservation, Development and Planning Department, Napa County Wildlife Conservation Commission, Trout Unlimited, Friends of the Napa River, Sierra Club, The Gasser Foundation, Napa County Farm Bureau, and Napa Valley Vintners. See letters of support in Exhibit

4. **Location:** The project is located southeast of the city of St. Helena in Napa County, within the jurisdiction of the San Francisco Bay Area Conservancy Program.
5. **Need:** The Zinfandel Lane Bridge has been acting as a partial barrier to fish migration for several years and in 2005, after a large storm event, conditions worsened to what they are today. Without funds from the Conservancy, the project will continue to be delayed until funds are available to match Napa County's commitment of funding. Until the barrier is removed, approximately 90 miles of high value habitat will remain unavailable to Chinook salmon and threatened steelhead trout. Given that the Napa River watershed is considered an "anchor watershed" for steelhead in the Bay Area and essential for protection of the species, delays would significantly impair recovery of the species.
6. **Greater-than-local interest:** The recovery of California's salmon populations is of regional significance. Moreover, sport and commercial fishing provides an important economic benefit to California.
7. **Sea level rise vulnerability:** The project is not located in an area close to a shoreline that is vulnerable to sea lever rise.

Additional Criteria

8. **Urgency:** Failure to implement the project in the near future will mean not providing access to spawning habitat for more runs of salmon in the Napa River. Implementing the project will also build on the momentum created by the Napa County Department of Public Works and the Napa County Resource Conservation District for restoration of Chinook Salmon and Steelhead trout habitat in the Napa River Watershed.
9. **Leverage:** See the "Project Financing" section above.
10. **Readiness:** The project is scheduled to be constructed in summer 2011 provided the necessary funding can be obtained.
11. **Cooperation:** The conceptual plan for modifying the fish passage barrier was developed with significant input from many organizations, including the Napa County Flood Control and Water Conservation District, the Napa County Resource Conservation District, and the California Department of Fish and Game.
12. **Vulnerability from climate change impacts other than sea level rise:** The project is designed to increase the resiliency of local native fish species by improving access to high quality habitat. In addition, when taken in combination with the downstream restoration that is improving channel habitat and providing for additional channel capacity, the overall condition of the area is becoming more resilient to the impacts that climate change might have in the region.

13. **Minimization of greenhouse gas emissions:** Greenhouse gas emissions generated from the project would only occur during construction from the operation of equipment. No project-level emissions would occur from operation of the fish passage. The majority of the emissions would come from worker trips, hauling of materials, and operation of excavators, trucks, backhoes, and cement trucks. Construction period emissions are estimated at 125 metric tons (per adopted CEQA document). A mitigation measure to control equipment exhaust is included in the CEQA document whereby the County shall require the contractor to implement the following air quality measures during construction as recommended by the Bay Area Air Quality Management District: 1) idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes, and 2) all construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. The impact on greenhouse gas emissions is considered less than significant.

COMPLIANCE WITH CEQA AND NEPA:

Pursuant to the California Environmental Quality Act ("CEQA"), Napa County, as lead agency, prepared an Initial Study and Mitigated Negative Declaration (MND) for the Zinfandel Lane Bridge Fish Barrier Project. An Initial Study was prepared for the project and sent to the State Clearinghouse and interested agencies on May 10, 2010 for a 30-day agency and public review period. Napa County received a letter from the State Clearinghouse dated June 9th stating that no state agencies submitted comments on the Draft Initial Study. Napa County did not receive any other letters regarding the project. On June 17, 2010, Napa County adopted the MND and Mitigation Monitoring Program ("MMP") (collectively, Exhibit 4). The Conservancy's grant requires that the Napa County implement the MMP.

CEQA requires consideration of potential environmental effects of agency actions and approvals, unless exempt. The Initial Study and MND identified potentially significant impacts of the proposed project in the areas of biological resources, hydrology/water quality, air quality, and cultural resources. Project and Mitigation measures were adopted to ensure that these potential impacts are avoided or reduced to less-than-significant levels as detailed here:

Project Measure – Control Dust

The principal concern about the effect of construction projects on air quality relates to the potential for earthwork and other activities to generate dust, including inhalable particulate matter (PM10) that poses a human health hazard. To address the potential for dust generation, the contractor will be required to implement Best Management Practices (BMPs) based on the Bay Area Air Quality Management District's (BAAQMD's) Feasible Control Measures for Construction Emissions of PM10 (Bay Area Air Quality Management District 1999) and described in the *Mitigated Negative Declaration and Mitigation Monitoring Program: Zinfandel Bridge Fish Passage Project*, appendix A. (Exhibit 4) These measures would also apply to ground disturbing maintenance activities.

Project Measure – Prepare an Erosion and Sediment Control Plan

The County will require that the contractor prepare an Erosion and Sediment Control Plan for the project prior to construction in order to reduce soil erosion and protect water quality during construction. Best management practices for erosion, sediment and turbidity control will be implemented and be in place at

commencement of, during and after any ground clearing activities or any other project activities that could result in erosion or sediment discharges to surface water. Further explanation of the BMPs can be found in the *Mitigated Negative Declaration and Mitigation Monitoring Program: Zinfandel Bridge Fish Passage Project*, appendix A. (Exhibit 4)

Project Measure – Prepare a Dewatering Plan

A Dewatering Plan will be developed by the contractor to address the dewatering systems, implementation, and maintenance. The plan will include a description of the pump systems proposed to remove seepage and maintain a dry work area. It will specify the location of the pumps and the measures necessary to protect water quality during pumping activities including but not limited to the requirements for pump refueling and the wastewater management requirements.

Mitigation Measure AIR -1: Control Equipment Exhaust

The County will require the contractor to implement air quality measures during construction as recommended by the Bay Area Air Quality Management District Guidelines). Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2484 of CCR). Additionally, all construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications.

Mitigation Measure BIO-1: Conduct Seasonally-Appropriate Special-Status Plant Species Surveys

Prior to construction of the access road, a qualified botanist will conduct seasonally appropriate surveys for listed plant species in the grassland habitat within the project impact area. The survey would determine presence or absence of listed plant species. If special-status plants are identified in the area and they cannot be avoided during construction activities, then the plants will be harvested and preserved in an on-site nursery for replanting along the access road as part of the restoration efforts.

Mitigation Measure BIO-2: Preconstruction Nest Surveys and Construction Exclusion Zones.

If construction occurs outside of the nesting season (September to January) then preconstruction nest surveys would not be necessary. However, if construction would take place during the nesting season (February-August), then preconstruction nest surveys will be conducted as follows in order to avoid potential impacts to nesting birds.

The County will retain a qualified biologist to conduct preconstruction nesting surveys within two weeks days prior to the start of construction. If raptors or special-status birds are nesting within 200 feet of the project site, a minimum 200-foot non-disturbance buffer will be established around the nest site. If a non-special-status bird that is subject to the Migratory Bird Treaty is identified nesting on the project site or within 50 feet of the project site, a non-disturbance buffer of 50 feet will be established around the nest site. The 200-foot nesting buffer may be modified to a minimum of 100 foot if a qualified biologist determines that the nesting birds are acclimated to human disturbance. Any reduction in the buffer size would require routine monitoring by a qualified biologist until such time that young fledge (leave the nest).

Mitigation Measure BIO-3: Preconstruction Surveys for Special-Status Aquatic Species

Preconstruction surveys for California freshwater shrimp, California red-legged frog, foothill yellow-legged frog, and northwestern pond turtle will be conducted by a qualified biologist approved to conduct such surveys by Department of Fish and Game, USFWS, and NMFS. If any special-status species are found in the project area during preconstruction surveys, DFG, USFWS and/or NMFS will be notified

and individuals will be captured by the qualified biologist and relocated to suitable areas above or below the project. Immediately prior to the start of construction activities, a qualified biologist will conduct preconstruction dipnet surveys for California freshwater shrimp. If California freshwater shrimp are present, the biologist will capture and relocate them to a suitable site downstream of the construction area. Surveys for California red-legged frog will be conducted according to current USFWS guidance (USFWS 1997), or as recommended by the agencies. If preconstruction surveys identify active northwestern pond turtle nests, a qualified biologist will establish a no- disturbance buffer zone around the nest using temporary orange construction fencing. The radius of the buffer zone and the duration of the exclusion will be determined in consultation with USFWS and DFG. The buffer zone and fencing will remain in place until the young have left the nest, as determined by a qualified biologist.

Mitigation Measure BIO-4: Protect Salmonids

To reduce the likelihood of adverse impacts on salmonids that use the Napa River corridor, in-channel construction will be limited to the dry season (April 15 to October 15). If necessary, upstream passage for salmonids will be provided through or around construction sites from September 1 through October 15. The determination of the need to provide passage will be based on the occurrence of more than 25 adult Chinook salmon or steelhead, on flow conditions, and on a cooperative assessment of passage needs by the County, NMFS, and DFG.

During in-channel work, flow will be diverted around the work area as described in the project description. Any salmonids present in the work area will be relocated under the supervision of a qualified fisheries biologist following procedures acceptable to the NMFS.

Mitigation Measure BIO-5. Avoid, Repair, and Revegetate Riparian and Aquatic Habitat

The County will implement the following measures to protect riparian and aquatic habitat:

• Avoid impacts to riparian trees and riparian habitat to the extent feasible.

• Remove sediments and foreign materials deposited by construction activities from the riparian and aquatic habitat.

• Restoration of disturbed waters to original contour and hydrologic condition.

• Stockpile and reuse topsoil from areas along the access road route and the staging area.

• Reestablish riparian vegetation and wetland plant cover using native seed stock, container plants, and/or cuttings collected from as close to the impact vicinity as possible.

• Implement stream bank stabilization measures such as placement of willow wattles and covering disturbed stream banks with a biodegradable fiber (jute) cloth, coconut fiber rolls, or another similar erosion control fabric.

• Spread a cover of straw, rice straw if available, over disturbed soils and work into soil. Apply an organically based tackifier on disturbed areas, if necessary, to reduce air and water erosion of soils.

• Plants will be installed, maintained and replaced such that 70 percent of the design plant density is present on the five-year anniversary of plant installation. A Planting Plan will be developed, and it will include a detailed description of the planting material, the planting instructions, plant installation methods, implementation schedule, and monitoring requirements.

Mitigation CR-1: Archaeological Monitoring

A qualified archaeologist will be on site during vegetation removal and grading of the temporary access road and staging area to monitor for the presence of archaeological materials. If such materials are encountered, the procedures described in Mitigation Measure CR-2: Treatment of Archaeological Deposits will be implemented.

Mitigation CR-2: Treatment of Archaeological Deposits

If archaeological materials are encountered during construction activities, the piece of equipment that encounters the materials must be stopped, and the find inspected by a qualified archaeologist. Project personnel will not collect cultural materials. If the archaeologist determines that the find is potentially significant (e.g., could contribute valuable information about the prehistoric use of the area), all work must be stopped in the immediate vicinity to allow the archaeologist to recommend appropriate treatment. Such treatment could include modifying the project to allow the materials to be left in place, or undertaking data recovery of the materials in accordance with standard archaeological methods.

Mitigation CR-3: Treatment of Human Remains, Associated Grave Goods, or Items of Cultural Patrimony

If human remains are encountered during construction activities, there will be no further excavation or disturbance of the remains, or nearby area until the Napa County Coroner has made the necessary findings as to origin. The remains will not be damaged or disturbed by further development until the County has discussed and conferred with the Most Likely Descendant regarding their recommendations. If concentrations of paleontological resources (e.g. plant and animal fossil specimens and fossil-bearing rock units) are encountered during construction, the City will halt ground-disturbing work in the vicinity of the find. Work near such finds will not be resumed until a qualified paleontologist has evaluated the materials and offered recommendations for further action.

Conservancy staff has independently reviewed the County's MND and MMP for the proposed project and recommends that the Conservancy, find that the project as conditioned avoids, reduces, or mitigates the possible significant environmental effects to a level of insignificance and there is no substantial evidence that the project, as mitigated, will result in significant effect on the environment as defined in 14 California Code of Regulations Section 15382. Upon approval, staff will file a Notice of Determination for this project.